

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3-22-83	
Company The Superior Oil Company			Connection Transwestern		
Pool			Formation Morrow		
Completion Date		Total Depth 15,119'		Plug Back TD 15,075	
Elevation		Firm or Lease Name Connally Federal			
Well No. 1		Well No. 1			
Unit Soc. Twp. R. J 15 22S 3E		County Lea			
State New Mexico		State			
Producing Thru Tubing		Reservoir Temp. °F 223° 14,780		Mean Annual Temp. °F 60°	
Baro. Press. - P _a 13.2		Baro. Press. - P _a 13.2			
L 14779.5		H 14779.5		C _g .597	
% CO ₂ .617		% N ₂ .523		% H ₂ S	
Prover		Meter Run 2.00"		Taps	

FLOW DATA						TUBING DATA		CASING DATA		Durability of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.		Temp. °F
1	2.00"	x	1.125	465	16"	65°	6670	60°	1100#	4/64	24 H
2	2.00	x	1.125	480	34	71	6370	60	1100	5.5/64	45 M
3	2.00	x	1.125	490	61	75	6160	60	1100	6/64	1 H
4	2.00	x	1.125	495	86	75	5880	60	1100	7/64	1 H
5							5630	60	1100		

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor F _g	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd
1	6.393	87.47	478.2	.9952	1.294	1.040	759
2	6.393	129.49	493.2	.9896	1.294	1.039	1101
3	6.393	175.20	503.2	.9859	1.294	1.040	1486
4	6.393	209.06	508.2	.9859	1.294	1.040	1773
5							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Dry Gas	Mcfd
1	7095	525	1.483	.9250	A.P.I. Gravity of Liquid Hydrocarbons		
2	7317	531	1.500	.9270	Specific Gravity Separator Gas	597	XXXXXX
3	7466	535	1.511	.9250	Specific Gravity Flowing Fluid	XXXXX	
4	7540	535	1.511	.9250	Critical Pressure	674	P.S.I.A.
5					Critical Temperature	354	R

NO.	P _i ²	P _w	P _w ²	P _i ² - P _w ²
1	40745.24	8115.2	65856.47	4942.29
2	38118.40	7889.2	62239.48	8559.28
3	34729.80	7585.2	57535.26	12263.50
4	31845.71	7323.2	53629.26	17169.50
5				

$$(1) \frac{P_i^2}{P_i^2 - P_w^2} = \frac{4.123}{1} = 4.123$$

$$(2) \left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^n = \frac{2.697}{1} = 2.697$$

$$Q_{OG} = 0 \left[\frac{P_i^2}{P_i^2 - P_w^2} \right]^n = \frac{4773}{1} = 4773$$

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Absolute Open Flow 4773	Well # 15,025	Angle of Slope 6 55° 07'	Slope, n 600
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Remarks: Calculated from known bottom hole pressures

Calculated by:	Checked by:	Created by:
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RECEIVED

JUL 5 1983

C.C.D.
HOBBS OFFICE